Bulletin of the Mineralogical Society of Southern California

Volume 95 Number 3 – March, 2022

The 999th meeting of the Mineralogical Society of Southern California

With Knowledge Comes Appreciation

A ZOOM Meeting

March 11th, 2022 at 7:30 P.M.

Program **: The Silver Mineralogy of Mexico"** Presented by Dr. Peter K.M. Megaw

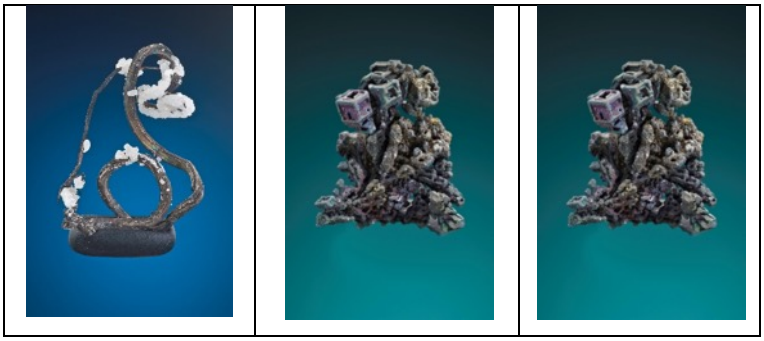
In this Issue:

Remember: If you change your email or street address, you must let the MSSC Editor and Membership Chair know or we cannot guarantee receipt of future Bulletins

About the Program: "The Silver Mineralogy of Mexico"

Presented by Dr. Peter K.M. Megaw

Mexico is the world's number 1 silver producer, historically and actually, having produced 25% of all the silver mined in human history. We'll examine the well-known silver deposits of Mexico in their geologic and mineralogical context, to both understand why Mexico is so silver rich and to highlight the similarities between related deposits worldwide. The Silver Mineralogy* of Mexico story is profusely illustrated with images of silver minerals and their fellow ore and gangue species.



Dr. Peter K.M. Megaw is a Consulting Geologist (PhD UofA) President of IMDEX/Cascabel and co-founder of MAG Silver and Minaurum Gold. Peter has been a dedicated mineral collector since first setting foot in Santa Eulalia in 1977. He moved to Tucson in 1979 and quickly joined the Tucson Gem and Mineral Society, taking on the job of Exhibits Chair for the Tucson Show in 1984. This has given him the opportunity to visit most of the world's major mineral museums with a special eye out for what they should bring to Tucson. His mineral collecting has come to focus almost exclusively on Minerals of Mexico and he has spoken and written extensively on specimen localities there; most recently in-depth articles for Mineralogical Record on the Santa Eulalia Mining District in Chihuahua, Mexico and Milpillas, Sonora (co-authored with Evan Jones). He is also a contributing editor for Rocks and Minerals and occasionally writes for Mineralogical Monographs. In his spare time he collaborates on studies of silver isotopes in silver minerals, is Mindat's moderator for submissions on Mexico and co-moderator of the FMF Mineral Forum, often with tongue planted firmly in cheek. A combination of the above led him to be awarded the Carnegie Mineralogical Award for 2009.

How to Join our ZOOM Meetings by Rudy Lopez

MSSC members are automatically included in the invite list each month.

For non MSSC Members who want to join this meeting. You must respond to our Programs chair, Rudy Lopez at programs@mineralsocal.org no later than Tuesday March 8, 2022. Please include "March ZOOM Meeting" in the subject line of your response. This response date will allow time for us to send you the information needed to participate in the ZOOM meeting and also will allow time to get everything organized.

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From the Editor: Linda Elsnau

As usual, our Program Chairman, Rudy Lopez has found us an excellent speaker for our March meeting. Do your best not to miss this month's program.

Our 2022 Roster is done and we currently show 85 members (not including family members). Our membership now comes from 7 states and 1 foreign country. I think we can thank our current ZOOM format for the many member locations! What do you think?

As usual, I'm asking my fellow members to write a short article for our Bulletin. Your article can be as short as a paragraph or two or as long as 2-3 pages. Suggested topics include: Why you love minerals, Your favorite mineral, A favorite Field trip location or memory. How about a short introduction of yourself to our members or how you got interested in minerals? Need any help or advice, contact me at *bulletin@mineralsocal.org* or MSSCBulletin@earthlink.net

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FROM THE PRESIDENT: Interesting Minerals, A to Z. Round 2, installment 24, the letter "X": by George Rossman

Wow, there are not many minerals that start with the letter 'x'. Last time I used the letter 'x' I discussed xenotime, yttrium phosphate, YPO_4. And that is about the only common mineral that starts with an 'x'. Excluding the xenotime series, there are only 15 minerals to choose from that start with 'x'. So, I will pick one.

Xonotlite, $Ca_6Si_6O_{17}(OH)_2$

Xonotlite is a hydroxylated calcium silicate that was first described by Rammelsberg as a new water-containing calcium silicate from a locality in Mexico where it occurs with apophyllite, $KCa_4[Si_8O_{22}]F{\cdot}8H_2O$, and bustamite, $CaMn(Si_2O_6)$. We now know that rather than molecules of water, xonotlite contains the hydroxide ion, OH^-. When heated, the OH in xonotlite is converted into water molecules that showed up in the early thermal-gravimetric analyses.

Figure 1. Xonotlite from the type Locality, Tetela de Xonotla, Mexico.
Photo Credit: Mark Garcia

> Rammelsberg C (1866) Ueber den Xonaltit, ein neues wasserhaltiges Kalksilikat, und den Bustamit aus Mexiko, Zeitschrift der Deutschen Geologischen Gesellschaft 18, 33-34.

The mineral **(Figure 1**) was named by Karl (Carl) Friedrich August Rammelsberg, a German mineralogist and chemist after the discovery locality in Mexico, a small settlement with the name of Tetela de Xontla.

A locality for which quality specimens are obtained is the Wessels Mine, in the Kalahari Manganese Mines, South Africa. Here, exquisite spheres of xonotlite occur along with fibrous crystals (**Figures 2-4**). The Wessels Mine extracts ore from a large manganese reserve in South Africa.

Figure 2. Cream colored balls and fibrous xals of xonotlite from the Wessels Mine.
Photo Credit: Rob Lavinsky

Figure 3. Xonotlite from the Kalahari Manganese Mines, South Africa.
Photo Credit: Mark Garcia

Figure 4. Xonotlite cream colored balls from the Wessels Mine.
Photo Credit: Rob Lavinsky

Ideally, xonotlite would be a colorless mineral, but its color can vary from grey to slightly brownish from minor impurities either admixed with the xonotlite, or substituting for the calcium. Pinkish specimens occur from the Wessels Mine, most likely when manganese substitutes for some of the calcium.

Several polytypes of xonotlite are known. Polytypes are minerals that have the same chemical formula, but which differ from one another only in the way that similar structure units stack in the atomic structure. Hejny & Armbruster in 2001 proposed that there were three polytypes designated as Ma2bc, Ma2b2c, and M2a2bc, but did not determine their structures experimentally. The polytypes would, however differ in the lengths of either the a- or c-axis.

> Hejny C, Armbruster T (2001) Polytypism in xonotlite $Ca_6Si_6O_{17}(OH)_2$. Zeitschrift fur Kristallographie 216, 396-408

The structure of one of the polytypes was later determined by Kudoh and Takekuchi which they named xonotlite_poR2a2bc. In their paper, they noted that xonotlite is a fibrous hydrated calcium silicate whose

chemical composition is closely related to that of wollastonite, $CaSiO_3$. They noted that upon dehydration, xonotlite is, in fact, transformed into wollastonite. Their sample was from Heguri, Chiba Prefecture, Japan.

Kudoh Y, Takeuchi Y (1979) Polytypism of xonotlite: (I) Structure of an AI polytype. Mineralogical Journal 9, 349-373.

We have xonotlite in California. It is found near Cloverdale in Mendocino County (**Figures 5,6**).

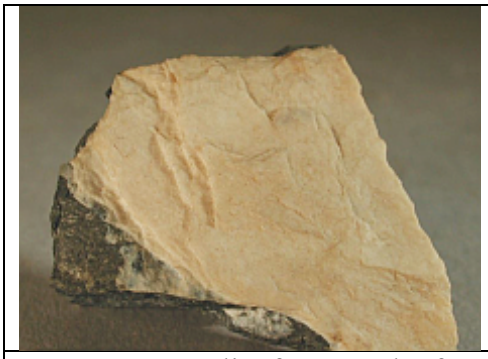

Figure 5 Xonotlite from north of Cloverdale, Mendocino County, California
Photo Credit: Mark Garcia

Figure 6. Xonotlite from near Cloverdale, Mendocino County, California.
Photo Credit: Mark Garcia

It also occurs in the Crestmore quarries in Riverside County, at Point Sal, and near Santa Ynez among other localities. It is also found in Minnesota (**Figure 7**).

Figure 7. Xonotlite from Mineral Center, Minnesota.
Photo Credit: Mark Garcia

Figure 8. Xonotlite from Point Shivery, Bay of Islands, Newfoundland, Canada.
Photo Credit: Mark Garcia

There are a couple other occurrences in Newfoundland. (**Figure 8**) One is at Rose Blanche (Brown, 1978) where xonotlite is found in what are called calc-silicate pods where it occurs with wollastonite, vesuvianite, garnet, calcite apatite and quartz. It is also found at Thunder Bay, an area famous for its amethyst deposits, and in Quebec.

Brown PA (1978) Xonotlite: A New Occurrence at Rose Blanche, Newfoundland. Canadian Mineralogist 16, 67-672

At a locality in Spain, xonotlite is found as two polymorphs where it both replaced hydrogrossular and was found in a reaction zone where the peridotite host rock was converted into serpentine at temperatures of 300 to 350 C (Esteban et al, 2003).

Esteban JJ, Cuevas J, Tubía JM, Yusta I (2003) Xonotlite In Rodingite Assemblages from the Ronda Peridotites, Betic Cordilleras, Southern Spain. The Canadian Mineralogist Vol. 41, pp. 161-170 (2003)

One would think that there could be several similar occurrences in California. Field collectors: here is your challenge: find new localities for xonotlite in California. I am sure not many of us have xonotlite in our collections.

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MINUTES of the February 18, 2021 ZOOM Meeting

Call to Order (Dr. Rossman):

At 7:32 p.m., the 998th Membership Meeting of the Mineralogical Society of Southern California (MSSC) was called to order by President Dr. Rossman, Ph.D. It was MSSC's 21st ZOOM conference Membership meeting, 4th under MSSC's license.

President's Remarks (Rossman)

Dr. Rossman reports that the International Mineralogical Association (IMA) approved 5,780 mineral species, no change from last month's report.

Regular Business (Rossman)

MINUTES: Dr. Rossman announced that the January 2022 Membership Meeting Minutes, as published in the February 2022 Bulletin, need to be approved. George asked for any corrections or additions, seeing none, called for a vote to approve the Minutes. There was no opposition seen and he declared the Minutes approved.

Announcements and Reports

1. Fieldtrip Report (Marek Chorazewicz)

Field trip is set for the morning, February 19th to L. Shouse mines (Red Hill) at the southern tip of Ord Mountain in the Lucerne Valley. Directions and specimen photos are posted to the website. There should be good weather to collect molybdenite platelets, which oxidize to yellow fluorescent powellite, dark green malachite, hematite, magnetite and pale green and tan stilbite. Meet up is 9 a.m.

2. 1,000th MSSC Special Event (Dr. George Rossman)

In April, just 2 months away, MSSC will have a special event presentation honoring its 1,000th Membership Meeting. Founded in 1931, MSSC has a rich history of collecting, past mineral shows, wonderful presentations and great show and tell. You won't want to miss this special ZOOM presentation that has been prepared. All are welcome to attend on April 8, 2022. Contact Rudy Lopez to get your name on the ZOOM invitation list.

3. Programs Chair (Rudy Lopez)

a) Rudy welcomed the out of town, state and country guests in attendance to tonight's meeting. He mentions that he has been doing outreach to other clubs and societies; invitations have gone out to 26 clubs thus far;
b) Speakers are scheduled through January 2023.

Program

Dr. Rossman turned the meeting over to Program and Education Chair, Rudy Lopez who introduced speaker H. Ir. Sujatmiko. Rudy tells us "Miko", is a geologist, a member of the Indonesian Gemstone Society, has been active in many organizations in Indonesia and is a member of MSSC. He was born in Pamekasan, Madura, East Java Province. After graduation his studies took him to the Department of Geological Engineering, he worked for the Geological Survey of Indonesia in Bandung (south of Jakarta, West Java Province) where he published systematic and regional geologic maps. He earned his post graduate degree from French Institute of Petroleum in France. After his retirement, Miko was a geological exploration consultant and, in 1990 he started to collect various gemstones from all major islands in Indonesia. Tonight, he presents a *Brief Introduction to Indonesian Gemstones*.

Sujatmiko, "Miko", begins his presentation with a history of his educational background. He says he's been to the United States 3 times with Rotary International, an organization he has been affiliated with for many years. He describes Indonesia as an area of 5.2 million Km^2 comprised of some 17,500 islands with a population of

272,000,000 people. There are 34 provinces, 718 languages, 41% of the population is Javanese and the main religion is Muslim. He showed a map of Indonesia overlay of the United States to get an idea of its size.

From the years1997-2001, there are 24 varieties of Indonesian gems placed on their national postage stamps. The actual gemstones are from those collected by Miko. They include for 1997: picture jasper, chrysacolla, geode and banded agate; in 1998: tektite, amethyst, chrysophrase, petrified wood and opal; for 1999 there is chrysoprase, smoky quartz, blue opal, Javan jade and silicified coral. For the year 2000 there is prehnite, chalcedony, volcanic obsidian and jasperized Limestone and finally for 2001 there is rose quartz, var. jasper +2, heliotrope, malachite and realgar. Quite an accomplishment, Miko! And, aside from those mentioned, Indonesia also has fossils and "stone-aged" tools and other minerals and gems not mentioned here. *[Secy Note: Eugene Dubois excavated fossils from Java Man in 1891 along the Solo River near Trinil, East Java Province; Java Man has an estimated date of between 1 million to 700,000 years ago.]*

Miko showed a gemstone distribution map of Indonesian gemstones. There are many in the western portions of the country. Western Java, in particular, has many. Precious opal from the Banten Province (Kalimaya/River of Illusion) just west of the capital, Jakarta, is beautifully shown in one of the photos in his presentation. Miko shows us a copy of a publication (2005) he wrote entitled, Opals From Java then displays a fabulous blue opal from West Java. He shows an array photo of silicified coral that comes from Jambi Province northwest of Jakarta, the pictures are stunning. Next is moss jasper chalcedony from East Java, close to Bali.

The variety of gemstones in West Java Province include in Sukabumi: purple chalcedony, blue opal, jasper, amethyst, agate, geode and wood fossil; in Cianjur there is red jasper; in Bandung there is agate, realgar, chalcedony and petrified wood; in Garut there is chrysoprase, chrysacolla, red jasper, petrified wood, multicolored chalcedony, rhodonite and moss agate and in Tasikmalaya you will find jasper, multicolored chalcedony, agate silicified coral, amethyst geode and jasper magnetite. As you can see, there is quite a lot!

In 2009, the Jasper Garden, Merahnya Batu Merah (Taman Jasper Tasikmalaya), was successfully protected and Miko was associated with the saving of this "garden". The fiery red boulders are spread over the width of the Ci Medang River! They range from the size of a fist to a house and are related to old volcanic activity. Miko showed a photo of himself standing beside a boulder at least 3 times his height and just as wide.

He goes on to show several photos of specimen of bloodstone, Paleolithic stone tools, and maps of the archipelago, chrysacolla, flower jasper pendants and rings. He tells about gemstone discoveries since 2014. They include lapilli obsidian (tuff) from western Sumatra, manakarra quartz (grape agate), garnierite/chrysoprase, fire opal, azurite, idocrase and bumble bee. Bumble bee is a carbonate rich rock composed of volcanic lava and sediment that was discovered in Indonesia in 1990.

There's a photo of a huge raw material, nephrite jade (Aceh), being dug out by at least 11 men. Garnierit from central and south-east Sulawesi is vibrant blue in the photo *[Secy Note: but usually is a green fine-grained nickel magnesium phyllosillicate]* and the fire opal from Central Java is simply beautiful. Miko wraps his presentation by showing us chalcopyrite and snow quartz (West Java), serpentine (Central Sulawesi), diamond (South Kalimantan), rhodochrosite and malachite (Papua) and other gems and minerals found in Indonesia. Wonderful photos!

Thank you Miko! Q&A followed included flower jade, diamonds, tektites and the struggle against exporting raw materials. Indonesians prefer to work the materials and export the final product.

There being no further business, the meeting was adjourned at 8:36p.m.

Respectfully submitted, Angie Guzman, MSSC Secretary

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*** * * * REMINDER: MSSC will celebrate its 1,000th Membership Meeting on April 8, 2022. Do you have a story, photo, memory to share? Please contact Program Chair Rudy Lopez to submit your item for the Member's Presentation. * * * ***

List of Upcoming MSSC Events : Mark your Calender!

Event	Date	Comments / Scheduled Program (if known)
Meeting Dates:	**ZOOM** April 8, 2022	MSSC Special Presentation
	ZOOM May 13, 2022	L, Michael Kaas: Silver Hill
	ZOOM June 11, 2022	John Rakovan -Mosaic and Split Crystals
	ZOOM July 8, 2022	Howard Heitner - Minerals in 19th century America.
Board Meeting	**ZOOM** April 3, 2022	ZOOM
Field Trip	TBA	

Note: Dates and programs shown above are subject to change. Check your bulletins to confirm final information each month.

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With Knowledge Comes Appreciation

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A Special Invitation to the Atlantic Micromounters' Conference

The Micromineralogists of the National Capital Area are inviting you to join us for our 48th Annual Atlantic Micromineral Conference via Zoom. We are a micromineral club located in the Washington DC metropolitan area.

48th Annual Atlantic Micromounter's Conference

April 2, 2022 1-5pm ET *(that's 10:00 am to 2:00pm Pacific Time)* virtually on Zoom

1pm *(10:00 am Pac time)* Presenter: Dr. Robert Hazen, Senior Scientist at the Carnegie Institution for Science and Robinson Professor of Earth Science, Emeritus, at George Mason University
Title: "Mineral Informatics: Visualizing the amazing mineral kingdom "

3pm *(12:00 pm Pac time)* Presenter: Alec Brenner, PhD student at Harvard University
Title: "Little magnets, big geodynamics: Micromineralogy as a tool for studying Earth's magnetic field and tectonics in deep geologic time"

Sign up to receive Zoom link through the "contact" on our club website. www.dcmicrominerals.org Meeting invite link will be emailed to you on March 26. (1 week prior to conference)

We would truly enjoy meeting fellow micromounters, as well as all geology friends.

Thank you, (Kathy Hrechka, Editor & conference chair in the Washington DC metropolitan area

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The Ride Share Listing is being temporarily discontinued until such time as MSSC starts holding in-person meetings again.

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OTHER FREE THINGS TO DO...by Ann Meister

The **Watson Lecture** for March has been postponed due to the omicron variant and will be rescheduled at a later date. *Find more past Watson Lectures on* Caltech's YouTube channel.

The **Von Kármán Lecture** is on Thursday, **March 17** at 7:00 PM. Available live on YouTube at March 2022 - Moon Dance: Dynamics of the Moons of the Outer Solar System (nasa.gov). The speaker is Dr. Marina Brozovic, Navigation Engineer, NASA/JPL. The title of the presentation is **"Moon Dance: Dynamics of the Moons of the Outer Solar System."** We are the map makers, the orbit takers. By knowing where the small moons of our solar system are, we can plan our missions. This will be a practical story of why orbits are important when looking at solar dynamics, resonances, and moons of the outer solar system.

The **UCLA Meteorite Gallery** has reopened. Check the website for hours. The monthly lecture will be presented on Zoom on Sunday, **March 20** at 2:30 PM. Speaker and topic are not yet available. **Zoom Registration:** https://ucla.zoom.us/meeting/register/tJEqduyupj0vGd3S0_52FsbHTbPjYr0sZQUj
If you need detailed instructions on how to join a meeting via Zoom please contact our Curatorial Assistant, Juliet Hook, at jahook@ucla.edu. Note: Registration is only needed once as this is a recurring meeting in Zoom. The speaker and topic will be announced on the website. Visit the website and check on events and videos and other neat things about meteorites, go to https://meteorites.ucla.edu

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July Featured Mineral: **Legrandite**

Formula: $Zn_2(AsO_4)(OH)\cdot H_2O$

Crystal System: Monoclinic

Name: Named in 1932 by Julien Drugman and Max H. Hey in honor of Mr. LeGrand [- 1920s?], a Belgium mining engineer and mineral collector who collected the first specimens.

irocks.com photo

Legrandite
Locality: Ojuela Mine, Mapimí, Mun. de Mapimí, Durango, Mexico
1.7 x 1.6 x 1.2 cm.

irocks.com photo

Legrandite
Locality: Ojuela Mine, Mapimí, Mun. de Mapimí, Durango, Mexico
1.5 x 0.6 x 0.3 cm.

irocks.com photo

Legrandite
Locality: Ojuela Mine, Mapimí, Mun. de Mapimí, Durango, Mexico
3.1 x 0.9 x 0.4 cm.

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Calendar of Events:

Only local area shows are listed here. Other CFMS Club shows can be found at: http://www.cfmsinc.org/

March 5-6, 2022 – Ventura, CA
Ventura Gem and Mineral Society
Ventura County Fairgrounds, 10 W. Harbor Blvd., Ventura
Hours: Sat 10 AM – 5 PM, Sun 10 AM – 4 PM
Website: http://www.vgms.org

March 11-13, 2022 – Victorville, CA
Hours: 9 to 5 Daily
Victor Valley Gem and Mineral Club
46th Annual Stoddard Wells Rockhound Tailgate
Contact: smaquilter12@gmail.com

~~March 12-13, 2022~~ – Arcadia, CA
Pasadena Lapidary Society
Rescheduled to August 20 - 21, 2022

March 19-20, 2022, Lemoore, CA
Lemoore Gem & Mineral Club
Lemoore Trinity Association Hall, 470 Champion St., Lemoore, CA 93245
Hours: Sat, 10 AM – 6 PM; Sun, 10 AM – 4 PM
Website: http://lemooregemandmineralclub.org

March 25-27, 2022, Clovis, CA
Fresno Gem & Mineral Society
748 Rodeo Dr., Clovis, CA 93612
Fri & Sat 10 AM – 5 PM; Sun, 10 AM – 4 PM
Central Valley Gem and Mineral Show | Facebook

April 1-3, 2022, Vista CA
Vista Gem and Mineral Society
Vista Gem and Mineral Show
Antique Gas and Steam Engine Museum, 2040 N. Santa Fe Ave., Vista, CA 92083
Hours: Fri/Sat 10 AM – 5 PM, Sun, 10 AM – 4 PM
Website: https://vistarocks.org

April 9-10, 2022, Thousand Oaks, CA
Canejo Gem and Mineral Club
Borchard Park, 190 N. Reino Rd., Thousand Oaks, CA
Hours: Sat 10 AM – 5 PM, Sun 10 AM – 4 PM
Free Admission and Parking
Website: https://cgamc.org

April 16, 2022 – Lake Elsinore, CA
Lake Elsinore Gem & Mineral Society
Rock and Craft Show
32097 Corydon Rd., Lake Elsinore, CA 92530
Hours: Saturday 10 AM – 4 PM
Contact: 1 (909) 208-6956, berylman50@aol.com

April 30 – May 1, 2022 – Anaheim, CA
Searchers Gem & Mineral Society
Brookhurst Community Center, 2271 W. Crescent Ave., Anaheim, CA 92801
Hours: Sat 10 AM – 5 PM, Sun 10AM – 4:30 PM
Website: https://searchersrocks.org

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2022 MSSC Officers:

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President	George Rossman	*president@mineralsocal.org*
Vice President	Cheryl Lopez	*vicepresident@mineralsocal.org*
Secretary	Angie Guzman	*secretary@mineralsocal.org*
Treasurer	Carolyn Seitz	*treasurer@mineralsocal.org*
CFMS Director	Angie Guzman	
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2022-2023	Ahni Dodge	
2021--2022	Rudy Lopez	
2021--2022	Pat Stevens	
2021--2022	Leslie Ogg	
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Micro Mount Conf. Chairman	Al Wilkins	
Program and Education	Rudy Lopez	*programs@mineralsocal.org*
Webmaster	Leslie Ogg	*webmaster@mineralsocal.org*

About the Mineralogical Society of Southern California

Organized in 1931, the Mineralogical Society of Southern California, Inc. is the oldest mineralogical society in the western United States. The MSSC is a member of the California Federation of Mineralogical Societies, and is dedicated to the dissemination of general knowledge of the mineralogical and related earth sciences through the study of mineral specimens. We are a scientific non-profit organization that actively supports those endeavors through public outreach, field study and related programs. The Bulletin of the Mineralogical Society of Southern California is the official publication of the Mineralogical Society of Southern California, Inc.

The MSSC meetings are usually held the second Friday of each month, January, February and August excepted, at 7:30 p.m. in Building E, Room 220, Pasadena City College, 1570 E Colorado Boulevard, Pasadena, California. However, due to current health considerations, MSSC meetings are held via ZOOM conferencing until further notice**.** The annual Installation Banquet is held in January, and the annual Picnic and Swap Meeting is held in August Due to PCC holidays, meetings may vary. Check the Society website for details.

The Society also sponsors the annual Pacific Micro mount Symposium held at the Fallbrook Mineral Museum during the last weekend of January.

Annual Membership dues for the MSSC are $30.00 for an individual membership, $40.00 for a family membership. Bulletins are delivered by email, there is an additional annual fee if you prefer paper bulletins mailed to your address. The Society's contact information:

Mineralogical Society of Southern California
13781 Alderwood Lane, #22-J, Seal Beach, CA 90740
E-mail: *treasurer@mineralsocal.org*
Website: ***www.mineralsocal.org*** **The Mineralogical Society of California, Inc.**

DISCLAIMER: The Mineralogical Society of Southern California, Inc. is not responsible, cannot be held responsible or liable for any person's injuries, damages or loss of property at or traveling to or from any general meeting, board meeting, open house, field trip, annual show or any other MSSC event.

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MSSC Bulletin Editor

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To:

With Knowledge Comes Appreciation

Your MSSC Bulletin Is Here!